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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : **Confirmation No. 9171**  
Syunsuke SATOH et al. : Attorney Docket No. 2005\_0341A  
Serial No. 10/527,746 : Group Art Unit 2834  
Filed March 14, 2005 : Examiner Thomas M. Dougherty  
TUNING FORK RESONATOR, TUNING : **Mail Stop: PCT**  
FORK UNIT, AND METHOD FOR  
PRODUCING TUNING FORK RESONATOR

**SUBMISSION OF ENGLISH VERSIONS OF INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY AND WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith for consideration by the Examiner are:

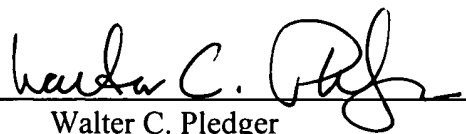
- 1) An English version of the International Preliminary Report on Patentability; and
- 2) An English version of the Written Opinion of the International Searching

Authority.

Respectfully submitted,

Syunsuke SATOH et al.

**THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEES FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975**

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July 5, 2006

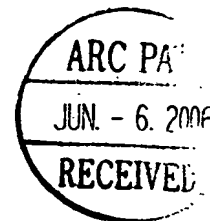
From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

To:

KURAUCHI, Giro  
Sumitomoseimei Midouji Bldg.  
14-3, Nishitemma 4-chome  
Kita-ku  
Osaka-shi, Osaka 5300047  
JAPON



Date of mailing (day/month/year) 26 May 2006 (26.05.2006)		
Applicant's or agent's file reference PCT124	IMPORTANT NOTIFICATION	
International application No. PCT/JP2004/010598	International filing date (day/month/year) 20 July 2004 (20.07.2004)	
Applicant DAISHINKU CORPORATION et al		

## 1. Transmittal of the translation to the applicant.



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

## 2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

## 3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  Masashi Honda
Facsimile No.+41 22 740 14 35	Facsimile No.+41 22 338 70 10

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference PCT124	<b>FOR FURTHER ACTION</b>	See item 4 below
International application No. PCT/JP2004/010598	International filing date ( <i>day/month/year</i> ) 20 July 2004 (20.07.2004)	Priority date ( <i>day/month/year</i> ) 22 July 2003 (22.07.2003)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DAISHINKU CORPORATION		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Date of issuance of this report 15 May 2006 (15.05.2006)
Facsimile No. +41 22 740 14 35	Authorized officer <div style="text-align: center; font-weight: bold; margin-top: 10px;">Masashi Honda</div> Telephone No. +41 22 338 70 10

# PATENT COOPERATION TREATY

TRANSLATION

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference  
**PCT124**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/JP2004/010598**

International filing date (day/month/year)

**20.07.2004**

Priority date (day/month/year)

**22.07.2003**

International Patent Classification (IPC) or both national classification and IPC

Applicant

**DAISHINKU CORPORATION**

1. This opinion contains indications relating to the following items:

- |                                     |              |                                                                                                                                                                      |
|-------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the opinion                                                                                                                                                 |
| <input type="checkbox"/>            | Box No. II   | Priority                                                                                                                                                             |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability                                                                     |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention                                                                                                                                           |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited                                                                                                                                              |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application                                                                                                                     |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application                                                                                                                |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2004/010598

Box No. I      Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/JP2004/010598

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
<b>1. Statement</b>			
Novelty (N)	Claims	1-8	YES
	Claims		NO
Inventive step (IS)	Claims	3-5, 8	YES
	Claims	1, 2, 6, 7	NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO
<b>2. Citations and explanations:</b>			
<p>Document 1: JP 2003-204240 A (Y.K. Piedekku Gijutsu Kenkyusho) 18 July 2003, Figs. 1-4 &amp; US 2003/0080652 A1</p> <p>Document 2: JP 52-52597 A (Citizen Watch Co., Ltd.) 27 April 1977, Figs. 5-8 (Family: none)</p> <p>Document 3: JP 62-4888 B2 (Citizen Watch Co., Ltd.) 02 February 1987, Figs. 5-10 &amp; US 4252839 A1 &amp; GB 1594980 A</p> <p>The inventions relating to claims 1 and 6 do not appear to involve an inventive step based on document 1 cited in the ISR, and document 2 cited in the ISR. Using an electrode corresponding to a groove extending electrode described in document 2 for a turning folk type flexible crystal vibrator in which an electrode corresponding to a beside-groove electrode of document 1 is formed would be easy for a party skilled in the art.</p> <p>The invention relating to claim 2 does not appear to involve an inventive step based on documents 1 and 2. Using an electrode corresponding to a groove extending electrode described in document 2 for a turning folk type flexible crystal vibrator in which an electrode corresponding to a beside-groove electrode of document 1 is formed so that the beside-groove electrode is formed integral with the groove extending electrode would be easy for a party skilled in the art.</p> <p>The inventions relating to claims 3-5 and 8 are not described in any of the documents cited in the ISR; nor would they be obvious to a party skilled in the art.</p> <p>The invention relating to claim 7 does not appear to involve an inventive step based on documents 1 and 2. Using an electrode corresponding to a groove extending electrode described in document 2 for a crystal unit comprising a turning folk type flexible crystal vibrator in which an electrode corresponding to a beside-groove electrode of document 1 is formed wherein the turning folk type flexible crystal vibrator is attached in a case would be easy for a party skilled in the art.</p>			